Application No.: 10/539,954 Docket No.: 13195-00006-US

Amendment dated March 15, 2010

Reply to Office Action of October 15, 2009

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently amended) A process for preparing methionine, homoserine and/or lysine in a transgenic organism plant, wherein the process comprises:

- a) introducing a nucleic acid comprising a nucleotide sequence encoding a threoninedegrading protein or a nucleic acid which increases threonine degradation in a transgenic organism plant, wherein the nucleic acid comprises
 - i) the nucleotide sequence of SEQ ID NO: 1;
 - <u>ii)</u> a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 2, or
 - <u>iii)</u> a nucleotide sequence encoding a polypeptide having at least 85% 95% sequence identity to the amino acid sequence of SEQ ID NO: 2;
- b) expressing the nucleotide sequence in the transgenic organism plant, and
- c) harvesting the transgenic organism plant or obtaining one or more of the amino acid methionine, homoserine, or lysine from the plant, and
- d) isolating the amino acid from the transgenic organism, the culture medium, or the transgenic organism and the culture medium.

2-3. (Cancelled)

4. (Currently amended) The process of claim 1, wherein the process further comprises introducing a nucleic acid comprising a nucleotide sequence encoding a lysine-degrading protein which comprises the consensus sequence of $G[X]_4GIM[X]_{45}M[X]_2RK[X]_2M[X]_{11}GGXG[X]_3E[X]_2E[X]_3W \text{ (SEQ ID NO: 29), or } LG[X]_9LVYGG[X]_3GIMGXVA[X]_9G[X]_3GXIP[X]_24MHXRK[X]_2M[X]_6F[X]_3PGG XGTXEE[X]_2E[X]_2TW[X]_2IG[X]_3KP[X]_4N[X]_3FY[X]_14F \text{ (SEQ ID NO: 30), or a nucleic acid encoding a protein which increases threonine degradation and lysine$

degradation in the transgenic organism plant.

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5-6. (Cancelled)

7. (Currently amended) The process of claim 1, wherein the transgenic organism plant is cultivated and harvested after introduction and expression of the nucleic acid.

- 8. (Cancelled)
- 9. (Previously presented) The process of claim 1, wherein the essential amino acid methionine is involved.
- 10. (Cancelled)
- 11. (Currently amended) The process of claim 10 29, wherein the transgenic organism is a microorganism is selected from the group of genera Corynebacterium, Brevibacterium, Escherichia, Bacillus, Rhodotorula, Hansenula, Schizosaccharomyces, Saccharomyces, Candida, Claviceps and Flavobacterium.
- 12. (Currently amended) The process of claim 10 1, wherein the transgenic organism plant is a crop plant.
- 13. (Currently amended) The process of claim 12, wherein the transgenic organism is a plant is selected from the group consisting of peanut, oilseed rape, canola, sunflower, safflower, olive, sesame, hazelnut, almond, avocado, bay, pumpkin, lettuce, flax, soybean, pistachio, borage, corn, wheat, rye, oats, millet, triticale, rice, barley, cassava, potato, sugar beet, feed beet, aubergine, tomato, pea, alfalfa and perennial grasses and feed crops.
- 14. (Previously presented) The process of claim 1, wherein the nucleotide sequence is from a eukaryote.
- 15. (Previously presented) The process of claim 1, wherein the nucleotide sequence is from the genus *Saccharomyces*.
- 16. (Currently amended) The process of claim 1, wherein the nucleic acid is incorporated into a nucleic acid construct or a vector for introduction and expression in said transgenic organism plant.

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17. (Currently amended) The process of claim 1, wherein additional biosynthesis genes of the amino acid prepared in the process are introduced into the organism plant.

18-25. (Cancelled)

- 26. (Currently amended) The process of claim 1, wherein the nucleic acid comprises a nucleotide sequence encoding a polypeptide having at least 95% sequence identity to the amino acid sequence of SEQ ID NO: 2.
- 27. (Withdrawn) A process for producing an animal or human food, cosmetics or pharmaceuticals, comprising obtaining the amino acids produced according to the process of claim 1, and formulating the amino acids into an animal or human food, cosmetics or pharmaceuticals.
- 28. (New) The process of claim 1, further comprising isolating the amino acid from the transgenic plant, the culture medium, or the transgenic plant and the culture medium.
- 29. (New) A process for preparing methionine, homoserine and/or lysine in a transgenic microorganism, wherein the process comprises:
 - a) introducing a nucleic acid comprising a nucleotide sequence encoding a threoninedegrading protein or a nucleic acid which increases threonine degradation in a microorganism, wherein the nucleic acid comprises
 - i) the nucleotide sequence of SEQ ID NO: 1;
 - ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO:2, or
 - iii) a nucleotide sequence encoding a polypeptide having at least 95% sequence identity to the amino acid sequence of SEQ ID NO: 2;
 - b) expressing the nucleotide sequence in the microorganism, and
 - c) harvesting the microorganism or obtaining one or more of the amino acid methionine, homoserine, or lysine from the microorganism.

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30. (New) The process of claim 28, further comprising isolating the amino acid from the transgenic microorganism, the culture medium, or the transgenic microorganism and the culture medium.